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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,599	08/03/2003	Hung-Hui Ho	REAP0018USA	1598

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(NAIPC) NORTH AMERICA INTERNATIONAL PATENT OFFICE
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER

CHEN, PO WEI

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/604,599	Applicant(s) HO ET AL.	
	Examiner Po-Wei (Dennis) Chen	Art Unit 2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claims 1-20 are pending in this application. Claims 1 and 11 are independent claims.

The present title of the invention is "Apparatus for color conversion and method thereof".

This action is non-final.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8 and 11-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Champion et al. (US 6,774,953; refer to as Champion herein).

3. Regarding claim 1, Champion discloses a method for transforming color signals comprising:

An apparatus of color conversion for converting a first color space to a second color space, wherein both the first and the second color space at least include a first color element and a second color element (lines 48-54 of column 6 and lines 37-46 of column 8), the apparatus comprising: a look-up-table for storing a relationship between the first color space and the second color space, and a converter for converting the first color space to the second color space according to the relationship stored in the look-up-table (line 66 of column 9 to line 25 of column 11 and lines 14-31 of column 124; while claim

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recites converter, it is noted that the processor in the transform system is converting color spaces by using the look-up-tables functions as the color converter).

An apparatus of color conversion for converting a first color space to a second color space, wherein both the first and the second color space at least include a first color element and a second color element, the apparatus comprising: a look-up-table for storing a relationship between the first color space and the second color space, and a converter for converting the first color space to the second color space according to the relationship stored in the look-up-table (lines 14-29 of column 3 and line 58 of column 10 to line 11 of column 12; color transformer corresponds to converter).

4. Regarding claim 2, Champion discloses a method for transforming color signals comprising:

Both the element and the second color element are first color one of red, green, and blue (line 43 of column 5 to line 6 of column 6 and Fig. 3).

5. Regarding claim 3, Champion discloses a method for transforming color signals comprising:

A gamma correcting circuit for converting the first color element of the first color space to the second color element of the second color space (lines 50-52 of column 9 and Fig. 2).

6. Regarding claims 4 and 5, Champion discloses a method for transforming color signals comprising:

The relationship stored in the look-up-table comprises a plurality of values of the first color element of the first color space corresponding to a single value of the second color element of the second color space; eight values of the first color element of the first

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color space correspond to a value of the second color element of the second color space (line 17 of column 7 to line 60 of column 7 and Fig. 4; it is noted that the output value (second color space) for each element (R,G,B) is calculated using 8 values of the input color space).

7. Regarding claim 6, Champion discloses a method for transforming color signals comprising:

The values of the first color space and the second color space are 8-bit binary values (lines 44-50 of column 5).

8. Regarding claims 7 and 8, Champion discloses a method for transforming color signals comprising:

The look-up-table is indexed using a number of bits of the values of the first color space; the look-up-table is indexed using the five most significant bits of the values of the first color space (lines 50-65 of column 5).

9. Regarding claims 11-18, statements presented above, with respect to claims 1-8 are incorporated herein.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Champion et al. (US 6,774,953; refer to as Champion herein).

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12. Regarding claim 9, Champion does not disclose the relationship between elements of first color space and the elements of second color space are stored in multiple sub-tables, instead a primary and a secondary tables are used (line 43 of column 5 to line 60 of column 7 and Fig. 3-4). It would have been obvious matter of design choice to modify Champion by having multiple sub-tables, since applicant has not disclosed that having multiple sub-tables solves any stated problem or is for any particular purpose and it appears that the system would perform equally well with the primary and secondary tables used by Champion.

13. Regarding claim 19, statements presented above, with respect to claim 9 are incorporated herein.

14. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Champion et al. (US 6,774,953; refer to as Champion herein) as applied to claims 1 and 11 above, and further in view of Lee (US 6,654,026).

15. Regarding claim 10, Champion does not disclose the apparatus is used in a liquid crystal display (LCD). Lee discloses a apparatus converting RGB signals to be supported by LCD (lines 26-37 of column 3 and Fig. 2). It would have been obvious to one of ordinary skill in the art to substitute the display system of Lee for the display system of Champion because Lee teaches that by utilizing the method can provide the advantage of displaying image signal on a LCD even when the image is signal is not supported by the LCD. Also, both Champion and Lee are directed to a method of converting color spaces to be able to display on a displaying device. By utilizing the teaching of Lee will allow the advantages of Champion's teaching to be utilized on another displaying device such as LCD.

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16. Regarding claim 20, statements presented above, with respect to claim 10 are incorporated herein.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sugiura et al. (US 6,621,497) disclose color conversion method.

Boenke (US 5,596,510) discloses color conversion using lookup tables.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-8365. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C Bella can be reached on (703) 308-6829. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Po-Wei (Dennis) Chen
Examiner
Art Unit 2676

Po-Wei (Dennis) Chen
December 9, 2004



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600